

REMARKS

Claims 1-13 are pending in this application. Claims 1, 6 and 12 have been amended, and new claim 13 has been added. Applicant reserves the right, however, to pursue the original claims and other claims in this and other applications. In view of the amendments to the claims and the remarks below, Applicant respectfully requests that the rejections be withdrawn and the claims allowed.

Claims 1-5 and 8-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Application No. 2003/0233507 to Yu et al. ("Yu") in view of U.S. Patent No. 8,075,793 to Le et al. ("Le"). The rejection is respectfully traversed.

Claim 1 describes a card access apparatus adapted to be connected to a plurality of types of cards. The apparatus is configured such that when one type of the types of cards is inserted to the slot, at least one of the signal buses connected to a connection point of another type of cards is electrically isolated from another connection point. Claim 1 has been amended to recite "the one type of card including a metal plate on an external surface having an insulator coating applied thereon."

As described in the specification, at paragraph [0005], a MS Duo card is an example of a card "including a metal plate on an external surface having an insulator coating applied thereon." For this card type, it is especially difficult to create a multi-card reader because, as described in paragraph [0006] of the specification, the insulator coating of the metal plate 14 of the adapter can be partially rubbed off by friction. If the card is inserted into a traditional combo adaptor once the insulator has rubbed off, portions of the metal will contact terminals meant for other card types and can cause irregularities or short circuits. See paragraph [0038]. Accordingly, performing the recited isolation when a "card including a metal plate on an external surface having an insulator coating applied thereon" is inserted into the slot is an important aspect of amended claim 1. The electrical isolation ensures that this type of card will not introduce these irregularities.

The cited references do not teach or suggest a system “wherein when one type of the types of cards is inserted in the slot and connected to one of the connection points adapted for said one type of the types of cards, the one type of card including a metal plate on an external surface of the card having an insulator coating applied thereon, at least one of the signal buses connected to at least one of the connection points adapted for at least one other type of the types of cards is electrically isolated from said at least one of the connection points, and wherein data is exchanged between the inserted card and the slot through the corresponding connection points in an opening part in the slot, the opening part having the plurality of connection points” as recited in independent claim 1.

Among other things, the cited references do not teach or suggest electrically isolating a signal bus upon insertion of a “card including a metal plate on an external surface having an insulator coating applied thereon.” The cited references do not disclose such a card at all, nor do they disclose performing an electrical isolation at a reader when the card is inserted into a slot that accepts different card types. Yu only performs isolation of a USB interface when a CF card is inserted into a dedicated CF card slot – it does disclose isolating a bus for another type of card when a “card including a metal plate on an external surface having an insulator coating applied thereon.” A CF card does not have such an external surface, and does not present the problem described in the present application. Le makes no reference to electrical isolation at all, nor does it describe the “one type of card” described in claim 1. Accordingly, neither reference contains any disclosure of a card that has a metal plate on an external surface with an insulator coating applied thereon, much less providing electrical isolation for a bus of another type of card when this card is inserted.

Moreover, there is no apparent reason to make the combination suggested by the Office Action. Yu teaches a system that isolates a USB slot interface when a CF card is inserted into a different slot. Yu at [0008], [0017]. Yu discloses USB, CF, ISA, and IDE interfaces which are all provided as separate slots. Yu at [0025]. When a CF card is detected, a switch isolates the connection so that inactive interface signals from other slots will not interfere with active interface signals from the CF card slot. The Office Action admits that these interfaces are not provided in a single slot, but the Office Action suggests that “it would have been obvious . . . to use the single slot

adapter taught by Le as the card acceptor in the card access apparatus taught by Yu.” Le, however, does not describe any way for the types of interfaces in Yu (USB, CF, ISA, and IDE) to be combined into a single slot. Le describes only using one slot for different types of memory card, and therefore does not disclose how the types of interfaces in the Yu device could be modified to use a single slot.

Electrically isolating connections provided in the same slot so as to avoid short circuits is a different problem than the signal interference described by Yu in paragraph [0016], and there is no apparent reason or way to combine the references to provide a single slot for multiple memory cards that provides such electrical isolation. In Yu, isolation of other interfaces is performed whenever any card is inserted into a particular slot (the CF slot), and Le does not teach any way to combine these other interfaces with the CF slot interface, much less a way to perform electrical isolation when a particular type of card is inserted into a slot. Le itself does not perform any electrical isolation, and the teachings of Yu would not apply to Le’s device because the memory card interfaces would not present the same type of inactive interface problem of Yu. Accordingly, there is no apparent reason to combine these references.

For at least these reasons, claim 1 is allowable. Claims 2-5 and 8-12 depend from claim 1 or recite similar limitations and are allowable for at least the same reasons.

Claims 6 and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yu in combination with Le and in further view of U.S. Publication No. 2002/0046877 to Hirai et al. (“Hirai”). The rejection is respectfully traversed.

Claims 6 and 7 depend from claim 1 and include all limitations of claim 1. As described above, claim 1 is allowable over Yu and Le, and Hirai does not cure the deficiencies of those references with respect to claim 1. Hirai discloses a CF card having a cover plate with an insulating adhesive sheet applied thereon. As described by the Office Action (at 5), however, the CF card’s plate has the insulating film applied to its inner metal surface. In Hirai, the insulator coating is used only on an internal surface of the device to provide adhesion and isolation for internal

components. See Hirari at [0028]; claim 4. Hirari's CF card does not present the issues of the card with an external metal surface that is covered by an insulating film, as described above. Accordingly, Hirai does not teach or suggest electrically isolating a signal bus upon insertion of a "card including a metal plate on an external surface having an insulator coating applied thereon." Claims 6 and 7 are therefore allowable for at least the same reasons that claim 1 is allowable.

New claim 13 depends from claim 3 and is allowable for at least the same reasons that claim 3 is allowable. Claim 13 incorporates the subject matter of claims 2-3, and these three claims together further describe when isolation is performed. Specifically, claim 2 states that an isolator is in an open state when the one type of card is not in the slot, and claim 3 states that the isolator is in a closed state when the one type of card is in the slot. New claim 13 recites that the isolator is in the open state when one of the other types of cards is in the slot ("wherein when said one type of the other type of the types of cards is connected to said one of the connection points adapted for at least one other type of the types of cards.").

In other words, since the connection points are all provided in one slot, claim 13 requires that an isolator be in an closed state when the one type of card (a MS Duo card, for example) is connected in the slot, and to be in an open state when another type of card (a CF card, for example) is connected in the same slot. The cited references, however, do not disclose any way to perform electrical isolation depending on a type of card inserted into a single slot. Yu is the only reference that discloses electrical isolation, but it performs electrical isolation merely by detecting that a card has been inserted into a slot – it does not teach or suggest a multi-card reader that would perform isolation depending on the type of card inserted into a slot. Accordingly, claim 13 is allowable for this additional reason.

In view of the above, Applicant believes the pending application is in condition for allowance.

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